

REMARKS

A new oath is submitted herewith in accord with the Examiner's requirement.

Claims 38 and 64 have been amended to correct inconsistencies identified by the Examiner. In addition, claims 41, 53, 55 and 59 have also been amended to correct inconsistencies in claim language. None of these amendments are intended to narrow claim scope.

In accord with the Examiner's requirement, the Specification has been amended to provided written correspondence for claims in relation to subject matter already disclosed by the figures. No new matter has been added.

The applicant notes the withdrawal of the indication of allowability of certain claims. It is anticipated that the amendments and following arguments will be sufficiently persuasive to again place the claims in condition for allowance.

Claims 37-81 are pending in the application. Claims 62-64 and 70-81 have been canceled without prejudice to focus the prosecution. Claims 56-57 have been canceled with their limitations incorporating into claim 48. Other claim cancellations are in order to preserve consistency.

Independent claims 37 and 48 stand rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Pat. No. 6,623,486 to Weaver. Independent claim 65 stands rejected under 35 U.S.C. § 103(a) as obvious over Weaver in view of U.S. Pat. No. 5,586,985 to Putnam. Claims dependent thereon stand rejected over Weaver alone or Weaver in view of U.S. Pat. No. 5,002,544 to Klaue or Putnam. The applicant respectfully traverses the rejection for the following reasons.

Claim 37, as amended, requires that a “first non-threaded alignment hole [be] sized to closely receive the K-wire in a predetermined fixed axial orientation *which is oblique relative to a bone contacting surface of said plate.*” In Weaver, the bone contacting surface of the plate is curved, and the suture holes are normal (and **not oblique**) relative to the bone contacting surface. Further, there is no teaching or suggestion that the alignment holes are of such a size that they would receive a K-wire in a predetermined fixed axial orientation. Such is certainly not required for the stated purpose of the suture holes: suture anchoring and provisional fixation.

Claim 37, as amended, also requires that at least one first alignment hole has a distalmost point defining a distal tangent line which is not displaced distally relative to a distal tangent line defined between two peg holes between which the alignment hole is positioned. In Weaver, the suture holes are provided at the distal end of the plate *distal of the threaded holes.* A distal tangent line to the suture holes is *distally displaced* relative to a distal tangent line to the threaded holes. This is not surprising, as the “suture holes” purpose is only “for suture anchoring and for provisional fixation” presumably with

respect to tissue located at a periphery of the plate; there is no teaching or suggestion with respect to any preliminary alignment of the plate relative to the anatomy. In the claimed invention, by having the arrangement of the alignment holes in the claimed location, when a K-wire is inserted therethrough, fluoroscopic observation of the anatomical location of the K-wire indicates whether the fasteners inserted through the peg holes will be properly aligned relative to the anatomy. See Spec. at p. 13, line 14 – page 14, line 3, among other disclosure. Weaver does not consider this function of the holes and provides no incentive to modify the plate to have alignment holes in the claimed location or to provide the claimed predetermined axial orientation to a K-wire.

Claim 48 includes the same limitation as claim 37 with respect to the “non-threaded alignment hole sized to closely receive the K-wire in a predetermined fixed axial orientation *which is oblique relative to a bone contacting surface of said plate.*” For the reasons advanced above, Weaver fails to teach or suggest this limitation.

Moreover, claim 48, as amended, requires that the body portion of the plate “define a shaft having a plurality of screw holes and a second non-threaded alignment hole longitudinally displaced relative to two of said plurality of screw holes, said second non-threaded alignment hole sized to closely receive the K-wire in a predetermined fixed axial orientation which is oblique relative to a bone contacting surface of said plate.” Weaver fails to teach or suggest a non-threaded alignment hole in the shaft that is in an oblique orientation relative to the bone contacting surface of the plate.

Claim 65 requires, among other limitations, an alignment hole in the head of the plate having an axis which is oblique relative to a bone contacting surface of said plate and a K-wire. Certain aspect of claim 65 and Weaver have been addressed above. The Examiner has combined Weaver to Putnam, col. 7, lines 34-48, which she asserts teaches a hole for temporary stabilization of a plate and a K-wire. This portion of Putnam teaches using a K-wire through a hole in a drill guide (not a bone plate) for temporary fixation of the drill guide. Referring to Figs. 5 and 6 of Putnam, the drill guide 30 does not include several claimed limitations: a body portion and a head portion *angled* relative to each other, at least one *screw hole* in the body portion, and peg holes in the head portion structurally adapted to *engage fixation pegs with a threaded head*. Moreover, there is no teaching that holes 34 fix K-wires in a predetermined fixed axial orientation, *at least one of said alignment holes having an axis which is oblique relative to a bone contacting surface of said plate*. Therefore, claim 65 is not obvious over Weaver on view of Putnam.

For the foregoing reasons, claims 37, 48, 65 and all claims dependent thereon are allowable over the Weaver reference.

Independent claims 37, 48, 59 and 65 stand rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Pub. No. 2004/0030339A1 to Wack. The applicant respectfully traverses the rejection for the following reasons.

With respect to claim 37, it is recognized that Wack discloses K-wire holes 871. Such K-wire holes 871 do not meet the limitations of the claim with respect to their required location on the plate. The distalmost tangent to each of the K-wire holes 871 is distally displaced relative to a distalmost tangent extending between two threaded holes 832. As discussed above, the applicant has reason for the relative location of the threaded holes and the smaller non-threaded alignment hole, and neither the rationale nor the limitation is suggested by Wack.

With respect to claim 48, while holes 871 are K-wire holes, there is no teaching that they are sized “*to receive the K-wire in a predetermined fixed axial orientation which is oblique relative to a bone contacting surface of said plate.*” It is submitted that the K-wires would be received in a direction normal to a bone contacting surface of the plate or would not be fixed in a such orientation. The claim also requires that the body portion of the plate “*define a shaft having a plurality of screw holes and a second non-threaded alignment hole longitudinally displaced relative to two of said plurality of screw holes, said second non-threaded alignment hole sized to closely receive the K-wire in a predetermined fixed axial orientation which is oblique relative to a bone contacting surface of said plate.*” Wack fails to teach or suggest a non-threaded alignment hole in the shaft that is in an oblique orientation relative to the bone contacting surface of the plate.

Claim 59 requires two sets of longitudinally displaced peg holes, and a non-threaded alignment hole *sized to closely receive the K-wire in a predetermined fixed axial*

*orientation which is oblique relative to a bone contacting surface of said plate and to said first set of peg holes.* There is no teaching or suggestion Weaver for such an alignment hole that fixes a K-wire in an axial orientation oblique relative to both the bone contacting surface of the plate *and* the first set of peg holes.

Claim 65 includes the same limitation as claim 59 with respect to the alignment hole having an axis which is oblique relative to a bone contacting surface of said plate. For reasons advanced above, this limitation is not shown or suggestion by Wack.

For the foregoing reasons, claims 37, 48, 59 and 65, and all claims dependent thereon are allowable over Wack.

With respect to the rejection of claims over Wack or Weaver in view of Klaue, the Examiner has stated that “applicant has not disclosed that this solves any stated problem or is anything more than one of numerous shapes of configurations.” While the respective claims are otherwise allowable for reasons advanced above, the issue needs to be addressed. Identified alignment hole 154 includes the claimed feature, and the Specification at page 15, lines 1-18 provides a detailed description of using such structure of the plate to solve a problem in the art (correction of a metaphyseal deformity) that is made possible by the structure of such hole. The structure of Klaue does not have a circular upper surface and cannot be used for the required procedure. There is no suggestion to modify Klaue for the stated purpose, particularly when Klaue is not a metaphyseal plate.

It is submitted that the claims are in order for allowance, and prompt allowance is earnestly requested. Should any issues remain outstanding, the Examiner is invited to call the undersigned attorney of record so that the case may proceed expeditiously to allowance.

Respectfully submitted,



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